

January 1993

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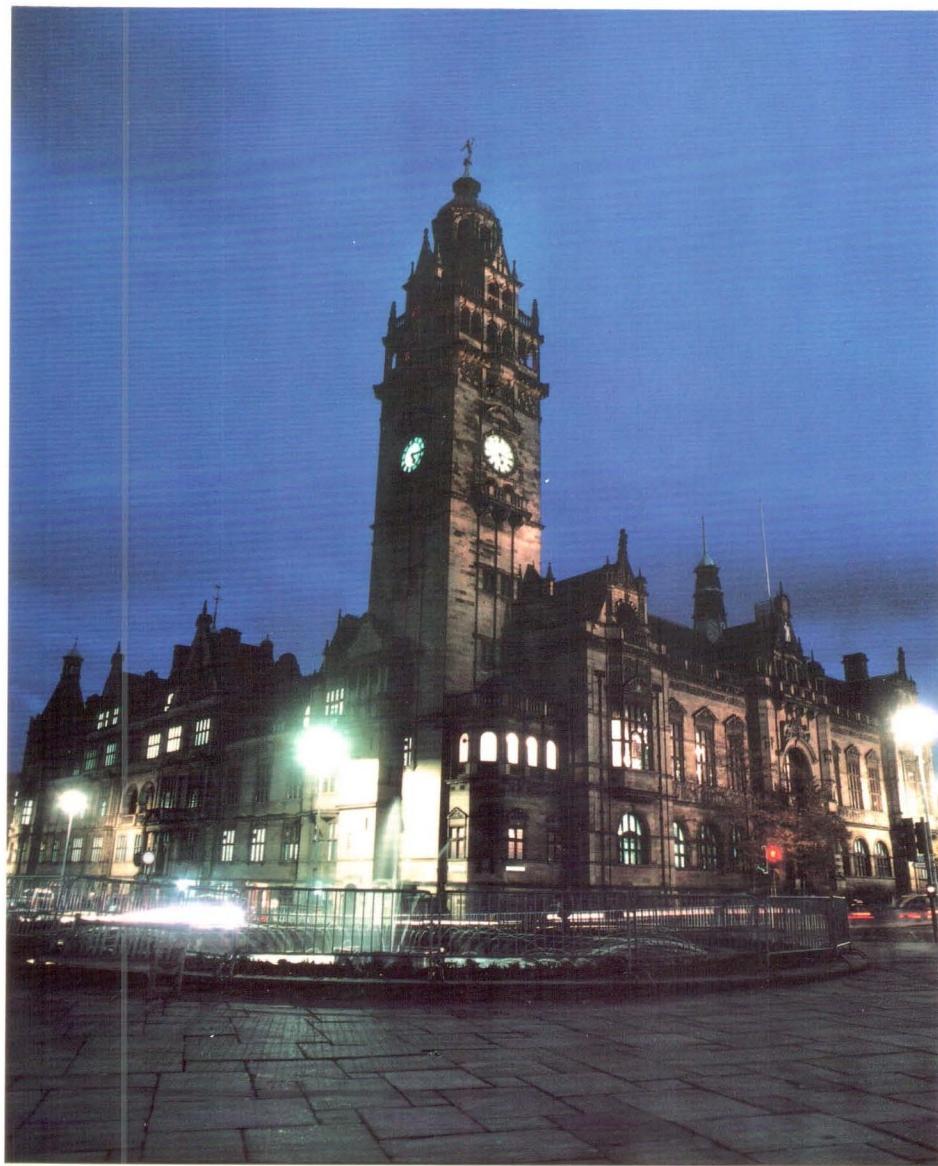
General Information Report

13

REVIEWING

ENERGY

MANAGEMENT



Energy Efficiency Office
DEPARTMENT OF THE ENVIRONMENT

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As part of its on-going programme, the Energy Efficiency Office is committed to providing guidance to all organisations that wish to review their current status in terms of the 'organisational aspects of energy management'. The EEO has already published documents under its *Making a Corporate Commitment Campaign* addressed to chairmen and chief executives.

Publication of this document initiates a consultation period during which the EEO wishes to collect feedback on the application of this 'Energy Management Guide'. This feedback will be used to review all of the publications in this series on the 'Organisational Aspects of Energy Management'.

BRECSU would very much like you to be part of this process. Please send all feedback to BRECSU at the address below. The same address can also be used for requests to be kept up to date with new publications as they appear. Please use the enclosed reply slip if available.

Address for replies:

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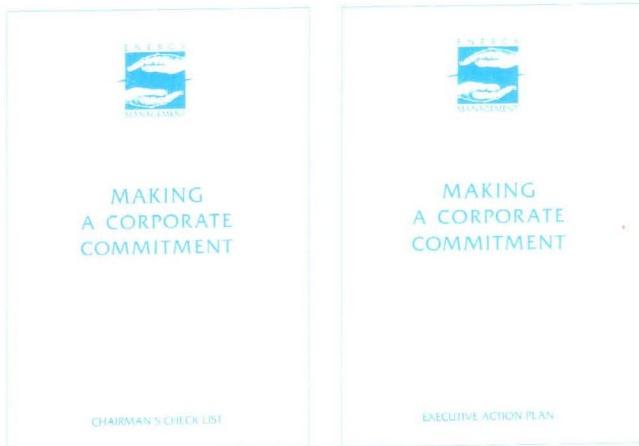
REVIEWING ENERGY MANAGEMENT

Purpose

This document is written primarily for building energy managers. It may also be useful to any managers wanting to improve the quality of energy management in their organisation. It includes the Energy Management Matrix – a diagnostic tool which can be used to establish your Organisational Profile for energy management. This Profile can then be used to:

- review the current state of energy management in your organisation, and
- identify where you can most productively invest your time and effort to improve it.

This document also describes how the Profile can be used to improve your own activities and build more supportive relationships with top management and with end users of the services you provide.



The Profile is intended to be used, in conjunction with the Chairman's Check List and the Executive Action Plan, as part of your organisation's response to the Energy Efficiency Office's Making a Corporate Commitment Campaign.

The Chairman's Check List and the Executive Action Plan contain advice for top and senior managers on how they can conduct a strategic review of your organisation's management of energy from the 'top down'. The Profile has a similar purpose – to help you review energy management from the 'bottom up'. It will provide you with a tool for identifying current strengths and weaknesses as seen from where you stand within your organisation.

The Chairman's Check List provides your Chief Executive with key questions which should be asked about your organisation's energy performance.

Key questions

- 1 What benefits can you get from reduced energy costs?
- 2 How 'green' is your organisation?
- 3 How comprehensive is your corporate energy policy?
- 4 How is your energy management structured?
- 5 What resources have you allocated?

You may well find yourself being asked to help answer these questions. Regard acceptance of a 'corporate commitment' to energy efficiency as a unique opportunity to raise the profile of energy management in your organisation. Make sure you exploit it as fully as possible.

Making energy a 'management' concern

The crucial idea you have to get across to those above you is that improving energy efficiency is not solely a technical issue. Gaining and maintaining control over energy consumption is primarily a managerial function. Five consequences follow:

1 Your post is primarily a managerial one

Although administrators with no technical training may find it difficult to be effective energy managers, all energy managers also need managerial training and experience, particularly in how to communicate with senior managers and customers of their services and in how to demonstrate value for money. If you don't already have these skills, make enquiries about what provision your organisation's top management can make for improving your effectiveness on this front.

2 Managing energy cannot be left to technical fixes

If the consumption of energy is to be brought under control throughout your organisation, and then successfully kept there, all managerial staff have to be held accountable for consumption in their own departments or premises.

This can be done through cost centring or by devolved budget holding. Or this responsibility can be written into managers' job specifications and used as one of the criteria by which their performance is evaluated. Your responsibility here is:

- to ensure that the energy awareness of managers and their staff is raised, for example, through induction and in-service training
- to offer them clear guidance on relevant 'good housekeeping' activities, and
- to provide them with soundly based advice on investment opportunities for improving energy efficiency.

3 You need backing from above to be effective

To control energy consumption in your organisation, you need to influence people – in other departments and above you in the hierarchy – over whom you have no authority. You will not be able to do this effectively unless you receive public backing from your chief executive. Even this will not be enough. Top management need to put in place mechanisms to ensure that you also get the assistance you need:

- from your own line managers, and
- from senior managers throughout your organisation.

Without their assistance, you are unlikely to be effective. You cannot be expected to make your organisation more energy

efficient on your own or with just the help of your own immediate staff.

4 Energy management is a corporate responsibility

Energy consumption should not be managed in isolation. Instead it should be treated as a significant part of your organisation's environmental strategy. It should also be closely related to your arrangements for quality assurance, preferably through the policy and practices introduced to comply with BS 7750:1992, *Specification for Environmental Management Systems*, BSI, London.

5 Energy management will not survive unless it is valued

No matter how effective your own individual input, unless the importance and value of your contribution to organisational performance is appreciated throughout your organisation – from top management through to individual budget holders and building managers – the continued existence of energy management is not secure. You must invest adequate time and attention in providing regular information about the value for money of your activities to all these parties. And you have to take care to deliver this in a concise, relevant and timely form.

The Energy Management Matrix

If you are going to help bring about the organisational changes and development required to improve energy management, you need a way of:

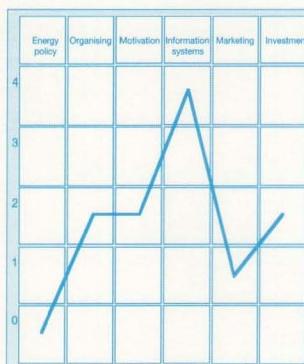
- identifying the issues with the highest priority for you
- reviewing how well you personally are performing, and
- assessing the quality and level of support which you are being given.
- focusing on your present situation and identifying where you want to get to next.

Establishing your Organisational Profile provides a quick, easy to use but effective method for doing this. Each column of the matrix deals with one of six organisational issues: policy, organisation, motivation, information systems, marketing and investment.

The ascending rows, from 0 to 4, represent increasingly sophisticated handling of these issues. Your eventual aim is to move your organisation up through these levels towards current 'best practice' and, as you do so, to develop balance across the columns.



Balanced matrix



Unbalanced matrix

Using the matrix to promote organisational change

There are ten straightforward steps you can use to bring about improvements to energy management in your organisation:

1 Make a photocopy of the matrix. Consider each column, one at a time. Mark the place in each column which best describes where you think you are currently located. Place your mark in the appropriate cell or between cells if you think this is more accurate.

2 Then join up your marks across the columns to produce a graph line. This is your Organisation Profile. It will give you an overall indication of how balanced energy management is in your organisation.

Don't worry if the Profile is uneven. This is the case in most organisations. The peaks indicate where your current effort is most sophisticated; the troughs where you are least advanced.

3 Make a second photocopy of the matrix and ask your line manager to repeat the process, marking it up in the same way.

4 Compare your Organisational Profiles. Where they disagree, discuss your assessments to see if you can reach an agreed compromise position. If you can agree the Profile, draw it on a third photocopy. If you can't agree, draw both Profiles on and label them as your separate views. Do not regard failure to agree as a problem. It simply reflects your different standpoints and understanding.

You may find it instructive to ask third parties to fill in the matrix, particularly if they are involved with the services you offer. Their Profiles will tell you how energy management is seen by others in your organisation. This can help you clarify what outsiders see as your strengths and weaknesses. Where you have collected this information, include their labelled Profiles on the third photocopy.

5 Working on your own, decide which columns contain issues that are most important in your own particular circumstances. Choose two columns where you would most like to see a change or improvement. Then list what you see as the five main obstacles impeding your progress to the next level up in each column. Then identify three key opportunities for improving your performance. Advice on how to do this is offered below.

Note that it will not always be the columns where you score lowest which warrant immediate attention. If the obstacles you identify seem insuperable, or if there seem no obvious opportunities for improvement, then you may be better off investing your limited time and attention elsewhere. Remember too that others, above you in your organisation's hierarchy or located in other departments, may be able to remove obstacles or to create opportunities which are simply not open to you. Try to identify where this is so and what they need to do if they are to help you.

6 Ask your line manager to repeat this process.

7 Again compare your lists. If you disagree, try to reach a consensus. If you can't, simply amalgamate your lists of obstacles and opportunities.

8 Pass a photocopy of the matrix to your senior managers and ask them to repeat the exercises done by you and your line manager. Ask them to return the results to you for collation. Include their Organisational Profiles on the third photocopy.

9 Write up the collated results in a report to your senior managers. Include all the labelled Organisational Profiles on the matrix and the collated lists of obstacles and opportunities. End with a set of recommendations proposing how identified obstacles can be overcome and how opportunities can be

exploited. Where you are unable to do this, table a series of questions for senior managers asking what they believe needs to be done to improve the present situation.

10 Use the dialogue started by these exercises to construct, in negotiation with your senior managers, an Action Plan for improving energy management over the next twelve months. Include some interim milestones and specify:

- who is responsible for taking each of the actions listed, and
- how progress is to be measured at the end of the period.

ENERGY MANAGEMENT MATRIX

(© BRECSU 1993)

Level	Energy Policy	Organising	Motivation	Information systems	Marketing	Investment
4	Energy policy, action plan and regular review have commitment of top management as part of an environmental strategy	Energy management fully integrated into management structure. Clear delegation of responsibility for energy consumption	Formal and informal channels of communication regularly exploited by energy manager and energy staff at all levels	Comprehensive system sets targets, monitors consumption, identifies faults, quantifies savings and provides budget tracking	Marketing the value of energy efficiency and the performance of energy management both within the organisation and outside it	Positive discrimination in favour of 'green' schemes with detailed investment appraisal of all new-build and refurbishment opportunities
3	Formal energy policy, but no active commitment from top management	Energy manager accountable to energy committee representing all users, chaired by a member of the managing board	Energy committee used as main channel together with direct contact with major users	M&T reports for individual premises based on sub-metering, but savings not reported effectively to users	Programme of staff awareness and regular publicity campaigns	Same pay back criteria employed as for all other investment
2	Unadopted energy policy set by energy manager or senior departmental manager	Energy manager in post, reporting to ad-hoc committee, but line management and authority are unclear	Contact with major users through ad hoc committee chaired by senior departmental manager	Monitoring and targeting reports based on supply meter data. Energy unit has ad hoc involvement in budget setting	Some ad hoc staff awareness training	Investment using short term pay back criteria only
1	An unwritten set of guidelines	Energy management the part-time responsibility of someone with only limited authority or influence	Informal contacts between engineer and a few users	Cost reporting based on invoice data. Engineer compiles reports for internal use within technical department	Informal contacts used to promote energy efficiency	Only low cost measures taken
0	No explicit policy	No energy management or any formal delegation of responsibility for energy consumption	No contact with users	No information system. No accounting for energy consumption	No promotion of energy efficiency	No investment in increasing energy efficiency in premises

Current obstacles to improvement

no top management action
problems with line management
departmental conflicts
organisational complexity
innovation stifled by bureaucracy
apathy from staff and/or building users
no motivation or incentives
no delegation of responsibility for energy
lack of reporting channels
poor access to information
poor quality of information
energy costs not separately identified
lack of monitoring facilities
lack of time and/or resources
lack of knowledge and/or experience
low investment or short payback periods
precedence given to core budgets

Obstacles to and opportunities for improvement

To be able to bring about change in your organisation, you need to be able to recognise:

- obstacles to improved energy management so that you can try to overcome them
- opportunities for change so that you can exploit them.

Your own circumstances may be unique. But you can still learn from comparing your situation with what happens in other organisations. Check through the examples cited opposite and see which are pertinent for you. You can use these check lists to help you and your colleagues with Steps 5 and 6 above.

Include the obstacles and opportunities you have ticked in these check lists, plus any others you have identified for yourself, in the report on improving your organisation's energy management which you pass on to your senior manager

Identifying your own strengths and weaknesses

There is no one plan for improvement which will suit all organisations. You need to tailor one to your own specific requirements. Even similar organisations find themselves in quite radically different situations, depending on what they have already done to improve their energy performance and how successful they have been to date.

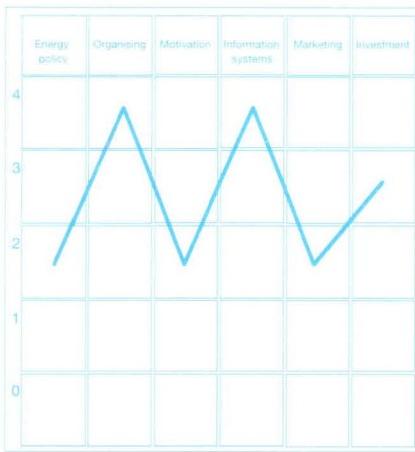
The three matrices illustrated show Organisational Profiles for three differing organisations, indicating where each of them has currently reached in terms of the organisational aspects of energy management.

Across these three organisations, more effort has been invested in a seemingly 'hard' technical issue like 'information systems' (probably reflecting time and money spent on setting up 'monitoring and targeting') than on 'soft', people-centred ones like 'motivation' or 'marketing'. This is common. Yet getting the latter right is just as important to the success of energy management. They too require your time and attention if you are to be effective in performing your job.

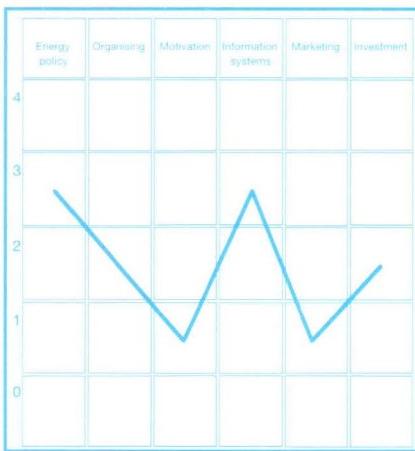
As the Profiles show, Organisation A is more advanced than the other two in its energy management. But, as the Profiles also illustrate, none of the organisations has grounds for complacency and they are each capable of making improvements, particularly in terms of balancing where their time and effort is being expended. This is also likely to be true in your organisation. Recognising this, and making your managers aware of its significance, is a necessary first stage in your campaign to improve your organisation's energy performance.

Immediate opportunities

increasing commitment of top management
developing and implementing a policy
focusing on energy efficiency as a green issue
publicising cost savings achieved
introducing cost centre accounting
improving energy accounting procedures
using more sophisticated investment appraisal
exploiting all new-build and refurbishment
assigning responsibilities for energy
marketing (inside and outside organisation)
training
offering incentives
upgrading promotional literature
acquiring new knowledge
broadening personal experience



Organisation A: 'energy policy', 'motivation' and 'marketing' are least advanced.



Organisation B: 'motivation', 'marketing' and 'investment' are less sophisticated.



Organisation C: 'policy' and 'organising' call for attention.

Managing change

If you set about improving the status and performance of energy management in your organisation, you will become involved in promoting change. Such change needs to be consciously managed and you need to plan:

- what you are trying to achieve
- how you intend to achieve it
- whose help and assistance you will need along the way
- whose antagonism and resistance you will have to overcome to be successful
- intermediate milestones so you can tell how much you are achieving.

You will have to make a strong case for change. It will not be sufficient for you to be convinced that your organisation should improve its energy performance. You must be able to convince others. This will test your powers of argument and persuasion – for you will normally have to influence others over whom you have no authority and who have (what they see as) much more pressing and deserving priorities.

Assemble the minimum of information and facts required to construct a compelling case for action. Then sell your case to decision-makers above you, or to others who can influence such decision-makers on your behalf. Keep it short and simple because:

- senior managers have only limited time available for hearing your case, and
- at some stage, it will probably have to be presented by others on your behalf.

There are two clear strands to keep in mind when assembling your case:

- 1 demonstrating 'value for money'
- 2 helping your organisation achieve its corporate objectives.

Your problem is how to persuade your colleagues that additional time or money spent on energy management activities will give good value for money. If you are proposing additional funding or requesting extra staff, provide detailed investment appraisals showing what rates of return can be expected. Justify what the resource requirements will be and then the benefits to your organisation if it chooses to act.

The most powerful cases you can make are to show how reductions in energy consumption can:

- fund core activities
- lower operating costs/raise profits
- improve products or services
- upgrade working conditions
- reduce your organisation's negative impact on the environment.

Where your organisation has already committed itself to an Environmental Strategy, this can provide a powerful lever for raising the importance of energy management. Significantly, reducing energy consumption is one of the few areas in the Strategy where your organisation can improve its environmental performance – not only with no additional overall increase in costs – but actually while achieving real savings.

A great deal is expected of energy managers, yet energy management may well be under-resourced in your organisation and you may find yourself needing to show results in order to get resources, yet not having the resources to produce the results. So:

- concentrate your efforts where you can make the most impact
- then publicise your success to win yourself the funding you need to improve energy management activities and for investments in energy efficiency.

THE ENERGY MANAGER'S GOLDEN RULE

show results to get resources

Your five commandments

1 Gain control

Ensure that you are buying fuel at the cheapest possible price and burning it as efficiently as possible with your existing plant before seeking additional investment funds. Raise awareness of energy waste and promote 'good housekeeping' wherever possible. Invest your own limited time and resources where you will make the biggest impact.

2 Measure how well you are doing

Compare your current and past performance, making sure you adjust for the two key variables – weather and building use. Remember to continue to claim credit for accumulated savings arising from past investments.

3 Report simply, clearly and relevantly

People responsible for energy need simple, clear reports that match the information they are used to handling in the rest of their work. Make sure your reports match their required format and delivery dates.

4 Share the glory

To maintain people's enthusiasm for conserving energy, you must ensure they get the praise and credit for making savings.

5 Promote your achievements with your managers

It is not enough to do a good job. You must also publicise your success in order to secure further funding.

For further information on this or other buildings-related projects, please contact: Enquiries Bureau, Building Research Energy Conservation Support Unit (BRECSU), Building Research Establishment, Garston, Watford WD2 7JR. Tel No. 0923 664258. Fax No. 0923 664097.

For further information on industrial projects, please contact the Energy Efficiency Enquiries Bureau, Energy Technology Support Unit (ETSU), Building 156, Harwell Laboratory, Oxon OX11 0RA. Tel No. 0235 436747. Telex No. 83135. Fax No. 0235 432923.

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